



*Zoom Room*  
<https://wsl.zoom.us/j/6527427760>

*Wednesday, August 25th, 2021*  
*3 pm*  
*(CET, Zurich Time)*

**Birmensdorfer Tree-Ring Lecture**

**Jonathan Barichivich**

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## **Tree-ring constraints for global land surface models**

Short-term forest responses (i.e., years to a decade) to global change factors are relatively well understood and skilfully simulated by global land surface models (LSMs), the terrestrial component of Earth System models. However, confidence on model projections weaken towards longer time scales and to the future, mainly because the long-term responses (i.e., decade to century) of these models remain unconstrained. This issue limits confidence on climate model projections. Annually-resolved tree-ring records have the potential to constrain model responses at interannual to centennial time scales extending back to pre-industrial conditions. Yet, this potential has not been realised. In this talk I will present our ongoing work (<https://jbarichivich.github.io/>) to develop novel observational constraints from tree-ring width and isotopic data to constrain and improve the representation of tree growth and physiology in the ORCHIDEE global land surface model (<https://orchidee.ipsl.fr/>). We will discuss the opportunities and model and data requirements necessary to achieve the integration of tree-ring data and global models.

Chaired by  
**Patrick Fonti**

## Birmensdorfer Tree-Ring Lectures

### Programme

Tree-Ring Lectures - Forthcoming: ... 2021 *Scientific talks and presentations given by WSL scientists and staff, typically a 2-hour monthly meeting*

Special Invited Tree-Ring Lectures - Organized ad hoc and ad libitum! *Invited guest lectures given by scientists, students, guests, visitors in the labs who are not present to give a talk during a regularly scheduled Tree-Ring Lecture*

Tree-Ring Spring's Event - Forthcoming: May 2022 *A springtime event, at Birmensdorf or surroundings*

Tree-Ring Summer Meeting - Forthcoming: August 2021 *A one- or half-a-day scientific meeting dealing in depth with one topic, finishing with a BBQ in the WSL gardens*

Tree-Ring Fall Excursion - Forthcoming: October 2021 *A one- or two-day scientific excursion of the whole tree-ring community with talks and presentations on research achievements or ongoing projects in the region*

Tree-Ring November Journal Club - Forthcoming: November 2021 *A half-a-day presentation of the most influential papers published by not-WSL staff in the different fields of tree-ring related sciences during the past year, chosen by selected WSL scientists and students*

Tree-Ring December's Forum - Forthcoming: December 2021 *A discussion among WSL scientists on hot and emerging issues in tree-ring science, moderated and including invited talks and a panel discussion or not, concluding into the traditional Dendro X-mas Party*  
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### Audience

WSL Dendrosciences Group's scientific and technical staff, WSL tree-ring scientists, PhD students, Master students, WSL scientists, tree-ring interested scientists and students working in the Zurich area (e.g., ETHZ, PSI, UZH) and in Switzerland or European countries (although we don't believe that people from overseas will run, swim and fly to these meetings, of course, scientists from other parts of the world are warmly welcome too!).

### Chair

Each meeting will be chaired by a WSL scientist depending on the topic and willingness.

### Proposals for meetings....

.... are welcome!

### Language

English preferred.

### Scientific Committee

Dr. Paolo Cherubini, Dr. Patrick Fonti, Dr. Holger Gärtner, Dr. Kerstin Treydte, Dr. Georg von Arx Organisation

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